Amendments to the Claims

The following listing of claims replaces all previous claim listings and versions.

1. (Currently Amended) A method for producing an adhesive surface on a substrate which can be bonded to another substrate comprising:

treating the surface by wet chemical etching that comprises immersing the substrate into a bath that includes an etchant to remove an oxide layer and to provide a hydrophobic surface; and

directly exposing the etched hydrophobic surface to a gaseous ozone atmosphere within a closed container to provide a dry hydrophilic surface.

2. (Original) The method according to claim 1 wherein the wet chemical etching includes an aqueous hydrofluoric acid solution (HF) as an etchant.

3. (Previously Presented) The method according to claim 1 wherein the wet chemical etching includes an etchant that includes hydrofluoric acid (HF), ammonium fluoride (NH_4F) and water.

4. (Original) The method according to claim 1 wherein the duration of wet chemical etching is in the range of about 5 seconds to about 30 minutes.

5. (Original) The method according to claim 1 wherein the temperature of wet chemical etching is in the range of between about room temperature to about 80°C.

Claims 6-10 (Cancelled)

11. (Previously Presented) The method according to claim 1 wherein the substrate is a silicon wafer.

12. (Previously Presented) The method according to claim 1 wherein the substrate is a metal.

13. (Previously Presented) The method according to claim 1 which further comprises bonding the etched surface of one substrate to an etched surface of another substrate, by laying one wafer on the other and applying pressure to one of the substrates to form a bonded pair of substrates.

14. (Previously Presented) The method according to claim 13 which further comprises annealing the bonded substrates to increase bonding strength to between 0.28 and 0.38 MPa when measured at room temperature.

15. (Currently Amended) The method according to claim 14, wherein the annealing temperature is ~~approximately~~ about 500°C.

16. (Currently Amended) A method for producing an adhesive surface on a substrate which can be bonded to another substrate comprising:

treating a surface of a substrate by wet chemical etching that includes immersing the substrate into a bath that includes hydrofluoric acid as an etchant to remove an oxide layer and to provide a hydrophobic surface; and

directly exposing the etched hydrophobic surface of the substrate to a gaseous ozone atmosphere within a closed container to provide a dry hydrophilic surface.

17. (Previously Presented) The method according to claim 16 wherein the wet chemical etching comprises a solution of the hydrofluoric acid with ammonium fluoride and water.

18. (Previously Presented) The method according to claim 17 wherein the duration of wet chemical etching is in the range of about 5 seconds to about 30 minutes.

19. (Previously Presented) The method according to claim 18 wherein the temperature of wet chemical etching is in the range of between about room temperature to about 80°C.

20. (Previously Presented) The method according to claim 16 which further comprises bonding the etched surface of one substrate to an etched surface of another substrate, by laying one wafer on the other and applying pressure to one of the substrates to form a bonded pair of substrates.

21. (Previously Presented) The method according to claim 20 which further comprises annealing the bonded substrates to increase bonding strength to between 0.28 and 0.38 MPa when measured at room temperature.

22. (Currently Amended) The method according to claim 21 wherein the annealing temperature is ~~approximately~~ about 500°C.

23. (Previously Presented) The method according to claim 16 wherein the substrate is a silicon wafer.

24. (Previously Presented) The method according to claim 16 wherein the substrate is a metal.